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TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 102

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CONTENTS

PAGE

WORLDWIDE AFFAIRS

Background Information on Coordinated Universal Times
(XINHUA Domestic Service, 7 Dec 79).................... 1

Soviets Look to Finns for Automated Phone Exchanges
(Pentti Suominen; HELSINGIN SANOMAT, 21 Oct 79)........ 2

Briefs

Philippines, Hungary Sign Agreement 4
Pretoria-Taipei Telecommunications 4
Soviet TV in Mongolia 4
Iraq, Mozambique Sign Agreements 5
Computer-Language Conference 5

ASIA

AUSTRALIA

Domestic Communications Satellite System Approved
(Various sources, 19, 20 Oct 79)....................... 6

Communications Minister's Announcement, by Richard Macy
Further Details Given, by Richard Macy
Benefits, Costs Analyzed, Editorial
'New Dimension' to Communications, Editorial

Briefs

High Speed Mail Service 11

CONTENTS (Continued) Page

INDIA

Electronic Exchanges Production by 1986-1987 (THE HINDU, 26 Nov 79)........ 12

Briefs
Satellite Station 13

JAPAN

New 'Information Supplying System' Being Tested (KYODO, 18 Dec 79)........ 14

PAKISTAN

Briefs
Radio Telephone Service 16

PEOPLE'S REPUBLIC OF CHINA

China-Made Computer Used To Receive, Transmit Telegrams (JIEFANG RIBAO, 16 Oct 79)........ 17

Shanghai Optical-Fiber Communication System Successful (WEN HUI BAO, 2 Oct 79)........ 19

Briefs
High Precision Computer-Calculator 20
Anhui Radio, TV University 20
Xinjiang Telecommunications Service 20

SOUTH KOREA

Briefs
Optical Fiber Cable System 21

EAST EUROPE

CZECHOSLOVAKIA

CSSR Communications Minister Comments on New Transmitters (Anna Zimaniova; PRAVDA, 4 Dec 79)........ 22

Briefs
New Television Transmitters 23
New Transmitters 23

CONTENTS (Continued) Page

LATIN AMERICA

CUBA

Havana's INTELSAT System Facilities Bolster INTERSPUTNIK (BOHEMIA, 2 Nov 79).................................. 24

Communications Gains Under Castro Reported to CEMA (GRANMA, 31 Oct 79).................................. 27

NEAR EAST AND NORTH AFRICA

IRAQ

Briefs

New TV Station 31

SUB-SAHARAN AFRICA

RHODESIA

Possibility of Satellite TV Reception Seen Unlikely (THE HERALD, 14 Dec 79).............................. 32

Briefs

Direct Dialing for Umvukwes 33

RWANDA

Briefs

Japanese Build Ground Station 34

SEYCHELLES

Briefs

Telecommunications Licences Renewal 35

SIERRA LEONE

Briefs

Satellite Station 36

CONTENTS (Continued) Page

SOUTH AFRICA

Telecommunications Equipment Agreement Concluded (THE STAR, 22 Nov 79)........................... 37

Licensing Change Should Stimulate TV Market (Lynn Carlisle; THE CITIZEN, 4 Dec 79)............. 38

Third Communication Satellite Station Goes Into Operation (Johan Kloppers; THE CITIZEN, 18 Dec 79).. 40

Black TV Channel Plans Reviewed (Ian Gray; THE STAR, 12 Dec 79).................... 41

Briefs
- Third Satellite Station 42

ZAMBIA

Rural Television, Radio Reception Problems Discussed (TIMES OF ZAMBIA, 5 Dec 79)....................... 43

USSR

Briefs
- Irkutskaya Oblast Retransmitter 44
- Stavropolskiy Kray TV 44
- Irkutskaya Oblast TV 44

WEST EUROPE

FEDERAL REPUBLIC OF GERMANY

Correspondent Views WARC-79 Conference (Karl-Otto Saur; SUDDEUTSCHE ZEITUNG, 10 Dec 79).... 45

NORWAY

Kiev Military Radar Transmitter Interfering With Short-Wave Communications (AFTENPOSTEN, 4 Dec 79).............................. 47

SPAIN

Briefs
- National Radio Newscasts 49

BACKGROUND INFORMATION ON COORDINATED UNIVERSAL TIME

OW101202 Beijing XINHUA Domestic Service in Chinese 1530 GMT 7 Dec 79 OW

[Report on reference material: Coordinated Universal Time]

[Text] Geneva, 6 Dec--The world administrative radio conference was recently held in Geneva. A resolution was adopted on replacing "Greenwich Mean Time" [GMT] with "coordinated universal time." The conference decided to use coordinated universal time as the universal standard time in the spectrum of radio communications.

GMT is a universal standard time well known by people for many years. Why should we replace GMT with coordinated universal time? In short, this is because GMT is not precise enough. As we all know GMT is based on the rotation of the earth; due to a certain motion generated annually by the earth's rotation, an error of nearly a second is thus registered annually in GMT. To deal with the development of modern science and technology, it is very important to have a more precise standard universal time.

Coordinated universal time represents a coordinated time based on the relative motion of the earth's rotation on its axis and the speed of the rotation, as well as on the constant readjustments of the shift of positions of the poles as affected by the sun. The international time bureau makes readjustments on coordinated universal time twice every year, and transmits a standard time signal to all parts of the world through the standard time broadcasting station. The readjustments made will be able to correct GMT's error of 1 second. In 1975 the international conference on weights and measurements proposed using coordinated universal time as the foundation for civilian time. In 1976 the internationl radio consultative conference put forward a concrete proposal on applying coordinated universal time to the spectrum of radio communications. Since then coordinated universal time has been used more extensively.

The use of coordinated universal time in the spectrum of radio transmission will play an important role to aviation, navigation, synchronizing digital communications and space flight. The use of this new universal standard time marks a rapid development of modern science and technology.

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SOVIETS LOOK TO FINNS FOR AUTOMATED PHONE EXCHANGES

Helsinki HELSINGIN SANOMAT in Finnish 21 Oct 79 p 35

[Article by Pentti Suominen: "Finland and Soviet Union Cooperate in Building of Phone Exchanges, Telefenno Receives 12 Million Markka Order from Soviet Union"]

[Text] Finland and the Soviet Union intend to enter into the joint production of telephone exchanges. The goal is to sell the products of this productive cooperation in third party countries.

This information was revealed in connection with the Soviet visit of Finnish Communications Minister Veikko Saarto, which ended on Friday.

At the same time Saarto witnessed the signing of the trade agreement worth 2 million rubles (approximately 12 million markkas) between Finnish Telefenno and the Soviet importer. Telefenno is selling to the Soviet Union digitally operated PMC-sound transfer equipment, which will make it possible to convey 30 conversations along the same cable.

According to Minister Saarto this transaction will employ 100 people in Finland for the period of a year.

The intent is to begin this productive cooperation in the building of telephone exchanges as soon as possible. The most difficult problem has been the mutual adaptation of Finnish and Soviet technology.

At this time it is still premature, however, to estimate the monetary value of this cooperation since itsquantitative side is still open.

The importance of productive cooperation and the marketing of the products of this cooperation in third party countries was emphasized in the 5-year trade agreement signed between Finland and the Soviet Union last month.

Minister Saarto's visit was unofficial, but he stated that the discussions with Soviet Communications Minister Nikolay Talyzim were especially substantive and in this respect the visit took on an official nature.

According to Saarto, Pekka Tarjanne, director of the Postal and Telegraph Administration, who visited the Soviet Union, discussed the automation of telephone traffic between Finland and the Soviet Union.

After the discussions Tarjanne was not able to say with certainty when the traffic could be automated. According to him automation will probably be carried out in a limited manner initially, Moscow and Leningrade only, for example.

The actual purpose of the visit was to attend the international electronics fair organized in Moscow. Communications systems, such as radio relays and information transfer equipment, built and developed by Nokia, Televa, and Telefenno aroused considerable interest at the fair. Also the computer systems developed by Stromberg-Data were of interest.

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BRIEFS

PHILIPPINES, HUNGARY SIGN AGREEMENT--The Philippines News Agency or PNA has entered into a new exchange agreement with the Hungarian National News Agency, the Magyar Tavirati Iroda or MPI. The agreement was the sixteenth such cooperative agreement concluded by the PNA with other national news agencies in Asia, Europe and Latin America. The agreement was signed by Director Lorenzo J. Cruz of the Bureau of National and Foreign Information of the Ministry of Pulbic Information, who is also PNA chief editor, during his visit in Budapest. Signing for MPI was its deputy director-general and editor-in-chief (Sandor Bujan). [Text] [OW141433 Manila PNA in English 0830 GMT 14 Dec 79 OW]

PRETORIA-TAIPEI TELECOMMUNICATIONS--Taipei, Dec 6 (CNA)--Direct telegram and telex communications between Taipei and Pretoria, capital of the Republic of South Africa, was inaugurated Wednesday, a spokesman of the International Telecommunication Administration of the Republic of China said. He said direct telephone communication between the two cities is expected to open in mid-1980. [Text] [Taipei CNA in English 0330 GMT 6 Dec 79 OW]

SOVIET TV IN MONGOLIA--Ulaanbaatar, 11 Dec (MONTSAME)--An "Ekran" system television receiving station began relaying Soviet television programs today for the people of Tsetserleg City. Before the end of this year another 19 such satellite communications stations will be built in aymag capitals and large population centers [as received]. These stations are a gift of the Soviet Union to the Mongolian people. Addressing a meeting of working people in Tsetserleg, the capital of Arhangay Aymag, N. Lubsanrabdan, member of the MPRP Central Committee Politburo and chairman of the party control committee of the MPRP Central Committee, stressed that the new "Ekran" space communications stations will permit television to be viewed by nearly 40 percent of Mongolian families throughout the country. As a result of this, the MPR working people will get the opportunity to get better and more comprehensively acquainted with the grandoise achievements of the heroic Soviet people in communist construction and the major events in the world. [Excerpt] [OW130450 Ulaanbaatar MONTSAME in Russian 1900 GMT 11 Dec 79 OW]

IRAQ, MOZAMBIQUE SIGN AGREEMENTS--A contract between the Iraqi News Agency and the Mozambique Information Agency was signed. It includes coordination, training and the exchange and transmission of news between the two agencies. The contract was signed by INA director Taha Yasin Hasan and (Jose Motaldibes), a technical expert in the Mozambique delegation. [Excerpt] [JN121508 Baghdad INA in Arabic 1420 GMT 12 Dec 79 JN]

COMPUTER-LANGUAGE CONFERENCE--Communications experts from 13 countries met this month in Melbourne to further develop international standards for technical languages used in computer-controlled telephone exchanges. The 80 delegates are part of a working party of the International Telegraph and Telephone Consultative Committee (CCITT) which is a branch of the International Telecommunications Union based in Geneva. Telecom Australia is acting as host. The delegates broke up into three sub-groups studying three different languages. CHILL (the CCITT High Level Language) is an English-like programming language to be used in implementing both operational and support software and switching systems. The Specification and Description Language. (SDL) also studied, is a graphical language based on transition diagrams. It aims to help a telephone company specify its requirements to manufactueres and to improve the manufacturers' ability to document the behavior of completed systems. The third language studied, MMML, or Man Machine Language, is a command and response type used for communication between operators and the switching system. A spokesman for the group said there were many benefits of standardisation including cutting training costs, ease of transfer of information and maintenance of equipment and a general improvement in the system. [Excerpts] [Melbourne THE AGE in English 16 Oct 79 p 30]

CSO: 5500

DOMESTIC COMMUNICATIONS SATELLITE SYSTEM APPROVED

Communications Minister's Announcement

Sydney THE SYDNEY MORNING HERALD in English 19 Oct 79 p 1

[Report from Richard Macy]

[Text] Canberra.--The Federal Government has given the go-ahead for the setting up of a $210 million domestic communications satellite system.

The satellites envisaged will be of a "direct broadcasting" type. They will be able to broadcast radio and television transmissions directly into remote homes, provide two-way telephone links for remote areas and handle conventional communications between towns and cities.

Announcing the plan yesterday, the Minister for Post and Telecommunications, Mr Staley, said the first Australian communications satellite was expected to be in orbit by the end of 1984.

The Opposition spokesman on post and telecommunications, Mr U. E. Innes, warned it appeared that under the Government's proposals "Mr Kerry Packer and the moguls of Australian media control" would benefit from the satellites rather than the general public.

But Mr Staley said: "We will certainly not be a party to developments which would allow any one broadcasting interest to control television in this country."

Three satellites to be bought

Mr Staley announced the Government's support in principle for the project after tabling in Parliament the findings of an inter-departmental working group which recommended the use of communications satellites in Australia.

Under the Government's tentative plans, three low-powered satellites will be bought.

One will be launched into space as an operational communications satellite, the second will be launched as an orbiting "back-up" and the third will remain on the ground as a spare.

They will also be used by the Departments of Defence, Health, Education, Science and Transport.

Mr Staley said the Government would be calling on satellite manufacturers to register their interest in tendering for the Australian system.

'Tyranny of distance'

He added that a temporary satellite project office would be set up under the Department of Post and Telecommunications to prepare the way for the satellites.

He stressed the Government had made no final decision on who would eventually own and control the system.

The working group recommended that a National Satellite Commission should be set up to run the satellite system.

Mr Staley told Parliament yesterday there were 40,000 Australians with no prospect of getting telephones and 120,000 with no hope of getting television by the existing ground lines.

"For many Australians, satellite communications offer the only practicable solution to the problems of how to provide any services at all within a reasonable time," he said.

"For others, satellite communications hold out the only hope for the improvement of poor services or enabling access to a wider choice of services."

The communications satellites would overcome the "tyranny of distance" which separated Australians, would upgrade education and health services for people in the outback and would encourage people to live and work in remote places.

Satellites would bring "major benefits to millions of Australians and would weld our scattered population into one nation to foster a sense of unity."

"Nothing could be gained by now delaying a decision in principle. The Government will not allow this country to be bypassed by progress."

Mr Staley said the working group and the National Satellite Task Force, which reported last year, had both found in favour of using satellites and had rejected claims that satellites would create unemployment.

Jobs would be created through Australian industry building satellite ground installations and the maintenance of the equipment.

The Minister said: "Rural television stations should not fear that they would be ruined by major city stations using the satellites to broadcast into the country."

Mr Innes, said that the Labor Party was not opposed to the use of communications satellites.

However, he said the Opposition was not convinced by the working group and task force findings that satellites would not create unemployment.

He warned that a Labor Government would put any satellite under the control of Telecom rather than an independent commission as proposed in the working group and task force reports.

The satellite system is expected to be able to provide people in the outback with three television channels (including the ABC).

Further Details Given

Sydney THE SYDNEY MORNING HERALD in English 19 Oct 79 p 14

[Report from Richard Macey]

[Text]

CANBERRA. — Australia's first communications satellite will probably ride into space aboard the United States' manned space shuttle, from the Kennedy Space Centre at Cape Canaveral, Florida.

Although the shuttle is not expected to make its first flight until at least March or July next year, the flight paln for the Australian craft is well known.

The satellite would be palced before launch into a cargo by in the back of th, shuttle's "oriber," a winged craft about the size of a DC-9 aircraft that can be launched like a rocket and returnd to earth on a runway.

After the shuttle is launched into an orbi about 300 kilometres above the earth, the cargo bays will be opened and the satellite, attacked to a small but powerful rocket, will be jettisoned into space.

The rocket will then fire its engines to blast the satellite into what is called a "geosynchronous" orbit, 35,780 kilometres aboe the equator, probably slightly to the north of Papua New Guinea or just east or Indonesia.

Most satellites, such as Skylab, the space station which plunged to earth in July, are only about 300 kilometres aboe the earth and take about 90
However, at 35,780 kiloactly 24 hours to complete an orbit.

Thus a satellite placed at this altitude over the equator will appear to a person on the ground to be fixed directly overhead in space.

This means the satellite is al- stations on the ground, unlike satellites at lower orbits which can be seen at night as they streak across the sky.

Each capital city and major town will be equipped with a large tracking station, or earth metres, it takes a satellite exwasy in the view of tracking station as they are called.

To transmit a television program, telephon, call, or any other type of electronic information from one city to another, the signal will go to the local earth station and then up to the stellite.

The satellite will then boost the strength of the signal before tion in the receiving city.

In the case of people in the outback, on oil rigs, in Antarctica or any other remote place with a small population the system will be much the same.

People who want to receive television or radio will need to buy a small earth station of their own, at a cost of $500 or possibly $1,000.

The station, which includes a dish-like receiving antenna just a metre in diameter, can even be fixed to the roofs of cattle stations.

People wanting a two-way telephone will need a much more complex earth station, retailing at about $20,000. However, it is almost certain the Government will be introducing some sort of subsidy for people in the outback without telephones.

The satellite proposed by the Government is expected to have about 15 circuits, or "transponders" as they are called.

The plan outlined yesterday by the Minister for Post and Telecommunications, Mr Staley, provides for five or six transponders for the ABS, two for the Department of Transport, two or three for Telecom, two for the Goverseas Telecommunications Commission and possibly three for commercial broadcasters.

There are only amslall number of satellite manufacturers, including Hughes and Westinghouse in the United States, Britain's Aerospace, and the Canadian Government.

The general manager of ATN Channel 7, Mr Ted Thomas, said last night that if the satellites to be introduced were "broadcast" satellites, it seemed likely that regional areas now receiving the ABC and a local channel would receive five channels.

"The market would be split between the regional station, the ABC and three stations broadcasting from the major cities," he said.

Mr Thomas said he did not think it was practicable to limit the broadcast from the satellites to prevent the major city stations telecasting across the country.

Mr Des Morton, the company secretary of Channel 10, said it was a "most welcome decision."

However, he said that if the television broadcast by satellite was to be limited to the people in remote areas it would mean a very, very high cost to bring television to about 2 per cent of the population.

Mr Sam Chisholm, the general manager of TCN Channel 9, said the satellite would mean that the people living in the country need no longer be treated as second-class citizens. "It is a decision which everyone should welcome."

Benefits, Costs Analyzed

Melbourne THE AGE in English 20 Oct 79 p 19

[Editorial: "Green Light for Satellite"]

[Text]

IT says much for the persuasiveness of the Minister for Post and Telecommunications, Mr. Staley, that at a time when the Government is pulling in its financial horns he has been able to persuade Cabinet to accept in principle a satellite communication system costing an estimated $210 million. If the Government has that much money up its sleeve, some will argue, there are plenty of other more urgently needed projects on which to spend it. In fact, as Mr. Staley was at pains to point out in his statement to Parliament on Thursday, only a fraction of that $210 million will be a direct non-recoverable charge upon the Government. For a start, $75 million would be for antennas which the users of the satellite system would be expected to provide themselves. Of the remaining $135 million, the Government's share would be $42 million spread out over three years. This leaves $93 million which would probably be financed by borrowings, and eventually repaid by the system's users.

Put this way, the satellite project looks to be rather less of an extravagance. In cost terms, it compares favorably with the $500 million which the Government is spending on extensions to the automatic telephone network. These extensions will affect 90,000 subscribers in outback areas. The satellite communication system stands to reach many thousands more. As Mr. Staley told Parliament, there are about 120,000 people who, because of their remoteness, have little hope of ever getting a conventional television service. In addition, 220,000 Australians have an ABC service only; others live in areas with reduced service, and others again (nearly one million, according to departmental estimates) have impaired or limited reception. The situation with radio is little better, with 375,000 people living beyond the normal reach of ABC frequency stations, while others can receive only the third ABC network.

A satellite communication system would extend the range of broadcasting services for all these people, giving them either an upgraded service or a service where they have none now. The ABC would be a regular user of the system (at an estimated cost of $3 million annually). So would Government departments; so, too, would the existing commercial networks which see in the system a means of extending their listening and viewing audience. Mr. Staley says one of the results will be "to weld our scattered population into one nation — to foster a sense of unity that will make us a great nation". While this may sound a touch rhetorical, if not fanciful, the fact remains that there are parts of Australia — outback stations, mining camps or settlements — that are out of touch with the rest of Australian society. Canada, which has a similar problem, has introduced its own satellite communication system to service its remote areas and settlements; and it is on that system that the Australian one is to be modelled.

A number of questions have still to be resolved. Should the satellite be operated by a separate authority? Or would it be more sensible to bring it under the umbrella of Telecom, which has different but related functions? There is also the cost. The public is entitled to some assurance that the working party has done its homework properly, and that once the project gets under way it won't suddenly be found to be far more costly than first envisaged. Finally, thought needs to be given to ensuring that a single commercial broadcasting interest is not allowed to dominate the system to the exclusion of other users. With these provisos, the satellite project looks to be an imaginative one which will bring the benefits of space age technology to a great many Australians.

'New Dimension' to Communications

Perth THE WEST AUSTRALIAN in English 20 Oct 79 p 6

[Editorial: "Via Satellite"]

[Text]

The news that Australia is to get a satellite communications system is exciting, and not only for the hundreds of thousands of people in remote areas who will be put within reach of telephone, television and radio services for the first time. The scheme promises to add a completely new dimension to the nation's communications capability, greatly improving existing services and creating new ones. Undertakings such as defence, transport, health, welfare and education all stand to benefit from the development.

At an estimated all-up cost of $210 million, the system will not come cheaply and serious questions have been raised whether expenditure on that scale is justified. Though a Commonwealth task force recommended last October that Australia should go ahead with a satellite system, one of its members, a Finance Department representative, dissented on the ground of cost.

But the case for going ahead appears to outweigh the counter-arguments. A strong point in favour is the task force's contention that, depending on the models chosen, the investment in the system's space segment could be serviced and recovered by about the end of the life of the first generation of satellites, assumed to be eight years, and sufficient funds could also be provided to meet the next generation costs.

The big decision remaining is the one that the Government has wisely postponed for now: Who will set up and run the system—Telecom, a new Commonwealth authority or a mixture of public and private interests? The effects on the economics and quality of Australian television, in particular, will have to be considered carefully. Properly and fairly handled, the system offers substantial rewards in these areas. But there are dangers to avoid. It would be damaging, for example, if the system gave rise to network monopolies that financially stifled local initiatives.

The Government has weighed a host of pros and cons in deciding to launch a satellite system; its next move demands equally close attention to detail.

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AUSTRALIA

BRIEFS

HIGH SPEED MAIL SERVICE--An Australian firm, Speed Words, has introduced a new text transmission service for the business world using word processing equipment. The firm also offers transmissions by high speed facsimile and telex. According to company manager, Stan Tomlins, the service, which has been operating for a couple of weeks between Melbourne and Sydney, is all set to transmit to New York and Washington D.C. The company is using Datronics equipment for the new service comprising two Vydec word processing systems (one in each city), a communicator and a direct page reader or OCR. [Excerpt] [Canberra THE AUSTRALIAN in English 15 Oct 79 p 12]

CSO: 5500

ELECTRONIC EXCHANGES PRODUCTION BY 1986-1987

Madras THE HINDU in English 26 Nov 79 p 16

[Text] New Delhi, Nov. 25. According to tentative proposals drawn up by the Union Ministry of Communications, India should start manufacturing electronic exchanges by 1986-87, Mr S. K. Ghose, Secretary of the Ministry, told newsmen on Saturday.

Mr Ghose, who took newsmen round the pavilion put up by his Ministry at the India International Trade Fair, said: "We may need, in the next ten years, two electronic exchange factories in operation, each producing five-lakh lines a year. The scheme has not yet been cleared by the Planning Commission or the Finance Ministry."

Mr Ghosh said that owing to inadequate production within the country on account of the constraint on resources, a substantial part of the country's requirements for telecommunications need to be imported. The proposed investment on telecommunications during the Plan period (1978-83) was Rs 1,849 crores and it was proposed to import equipment worth Rs 190 crores. The imports would cover automatic exchanges and certain types of transmission equipment not fully developed within the country.

Replying to questions about the long waiting lists for telephone connections. Mr Ghose said that while the demand for telephone connections had been growing at an annual rate of 12 percent since 1974, the provision made for meeting the demand was only 10 percent, and the indigenous production of telecommunication equipment was not sufficient even to meet this. He could not, therefore, hold out any hopes of being able to cut down the waiting period in the near future as, by the end of the Sixth Plan, there would still be 3.5 lakh connections on the waiting list after provision of 11.5-lakh additional lines.

The pavilion, put up by the Communications Ministry at the Trade Fair, presents in vivid detail the progress made by the Postal and Telecommunications services, the Hindustan Teleprinters, and the Indian Telephone Industries. A highlight of the pavilion is the presentation of the Madras-Penang submarine cable project, now under execution.

CSO: 5500

BRIEFS

SATELLITE STATION--Mizoram will be linked with earth satellite by early next year, according to the general manager of Telecommunications (north-eastern circle), Mr S. K. Ray. He told reporters in Aizawl on Monday that the Aizawi earth satellite station would be commissioned before March and a television circuit be made available to Mizoram by 1981.--UNI. [Text] [Calcutta THE STATESMAN in English 27 Nov 79 p 9]

CSO: 5500

NEW 'INFORMATION SUPPLYING SYSTEM' BEING TESTED

OW180821 Tokyo KYODO in English 0040 GMT 18 Dec 79 OW

[Text] Tokyo Dec 18 KYODO--Tests on a new type of information supplying system linking telephone systems and household TV receiving sets will be started in Tokyo on December 25 by the Posts and Telecommunications Ministry and the Nippon Telegraph and Telephone Public Corporation (NTT).

Officials of the Posts and Telecommunications Ministry said Tuesday the experiments on the Character and Pattern Telephone Access Information Network System (CAPTAINS) will be continued until March 1981 during which checks will be conducted on technical matters concerned with use of the system and views of the subscribers taking part in the tests.

Under the CAPTAINS system, information concerned with livelihood, such as news, weather forecasts, purchasing guides and matters related to education, amusement and leisure, will be supplied to subscribers by utilizing ordinary phone circuits and TV sets.

A special adapter and a key pad must be used in order to utilize the system under which the information will be supplied upon request from a central information center.

The system was developed by NTT and a CAPTAINS system development research institute was established late in February for its operation.

Information matters, or software, will be supplied by a total of 142 firms and organizations.

They include 26 mass media establishments, including the KYODO News Service, 29 publishing firms, 20 department stores, 19 travel and transportation agencies and 25 public organizations.

A similar system already is being operated on a commercial basis in Britain.

The Posts and Telecommunications Industry has selected 800 persons in Tokyo to monitor the system during the test period.

Checks also will be conducted at some 1,000 places.

The ministry plans to exhibit terminal equipment for the system at the Telegraph and Telephone Exhibition Center on the 30th floor of the Kasumigaseki building in Toranomon, the Communications Museum at Otemachi and at 14 other places in Tokyo, including hotels.

CSO: 5500

BRIEFS

RADIO TELEPHONE SERVICE--Federal Communications Minister Mohyuddin Baluch formally inaugurated in Quetta 3 December the radio-telephoto service between Quetta and the major cities of the country. The service provides facilities for transmitting and receiving pictures between Quetta, Lahore and Karachi. From Karachi, the telephoto service can be extended for international use. [Karachi Domestic Service in English 1700 GMT 3 Dec 79 BK]

CSO: 5500

CHINA-MADE COMPUTER USED TO RECEIVE, TRANSMIT TELEGRAMS

Shanghai JIEFANG RIBAO in Chinese 16 Oct 79 p 1

[Text] JIEFANG RIBAO reporter Cao Yuhe [2580 3768 0735] reports that telegrams transmitted from Shanghai to the 15 cities of Guangzhou, Shenyang, Harbin, Chengdu, etc, originally took an average of 38 minutes to reach their destination. Now they take only 3 minutes, on the average. This is due to the fact that with the support of Shanghai Radio Plant No 13 and the Department of Computer Sciences of Fudan University and more than 3 years of effort, the Shanghai Municipal Telegraphic Bureau has succeeded in adopting a China-made computer to realize automatic receiving and transmitting telegrams to create this new condition. This is a great and important reform in telecommunication technology in China. It has enabled the Chinese telecommunication technology to begin to free itself from the backward condition of manual receiving and transmission and to step into the technological world of the 1970's.

The Shanghai Municipal Telegraphic Bureau is the important headquarters of domestic and international telecommunication. It receives and transmits more than 80,000 telegrams a day. Just before and after New Year's Day and the Spring Festival the maximum volume may reach above 120,000. Of this volume, 80 percent must be transmitted to other places. Due to the fact that the 13 processes in the transmission procedure were accomplished manually, the labor intensity of the telegraphic workers was extremely high and they worked rather slowly and regularly inefficiently to receive many criticisms from the masses. Early reform of this backward condition had been a common wish of the telegraphic works and the masses of the populace.

The Shanghai Municipal Telegraphic Bureau has 45 lines. Automatic receiving and transmission have been realized with the adoption of electronic computers for a first batch of 15 lines only. Manual receiving and transmission remain the case with the remaining 30 lines. A few days ago, the reporter visited the plant of the telegraphic bureau where telegrams were manually received and transmitted and the plant where telegrams were received and transmitted automatically through computer control. The two plants formed an extremely obvious contrast. The manual plant is a giant hall of an area of 700 m^2, in which more than 100 telegraphic workers work in extreme tension. Their hands never stop, while their eyes must be fixed on the contents of the telegrams and must not allow errors to escape under their eyes. The teletypewriters and receivers tick away unceasingly to create a noise level of 80 decibels, similar to that of a textile mill. Next door to that giant hall, there are two rooms of a total area of 90 m^2 where an electronic computer is used to control telegraphic receiving and transmission. In these rooms, two DJS-131 general purpose electronic computers made by Shanghai Radio Plant No 13 are installed. One is the main machine the other is the reserve to perform the operation. In these two rooms, there is no noise. All is quiet and clean. Two workers sit at the control center to monitor closely every signal that is dispatched from the control center. Rows of little indicator lights come on and off to demonstrate the condition of reception and transmission of the 15 lines so that it can be understood at a glance. If a problem occurs, the control center will produce a sharp alarm. In the plant, there are only five telegraphic workers. They sit quietly by the machines. Next to the machines, there is also a piece of equipment the size of a washing machine. It regularly makes the noise of a typewriter. The comrad of the telegraphic bureau introduced it by saying that this instrument types out copies of 80,000 telegrams a day so that they can be examined and checked any time. In that manual plant next door, this work is performed by 50 workers. This type of backward manual operation started in 1880 and carried to the present through a whole century.

From 25 July when the automatic procedure was officially in use to this day, five advantages have been demonstrated: (1) The quality of telegraphy has been improved. In the past 2 months, the computer has received and transmitted more than 800,000 telegrams and there have been no omissions or errors. The number of inquiries and searches have been greatly reduced. After the adoption of computer control, the rate of character variation has been greatly reduced. (2) The telegraphic transmission time has been greatly shortened. The speed of receiving and transmitting is improved more than ten fold over manual operation to prevent telegrams to become useless due to delays. (3) A great deal of equipment and supplies have been saved. If all the lines are changed into automatic receiving and transmission, more than 150,000 yuan worth of paper may be saved at least. (4) The labor productivity is greatly improved; and the labor intensity is greatly reduced. In the automated plant, each telegraphic worker can handle 2,000 telegrams per shift on the average (there remains a great deal of potential left.) With manual operation, each worker can handle 800 telegrams per shift. (5) It is convenient to popularize and extend. The 2-month test operation has proved that with two computers, the operation is stable and can continue more than 500 hours, [sic] while a single machine can continue to operate over 1,000 hours to guarantee a normal progress of telegraphic reception and transmission. During the time of research and installation of computers, the telegraphic bureau also trained a team of design specialists and repair workers.

This important technological reform involves the telegraphic bureaus of 15 cities of Guangzhou, Nanjing, Hangzhou, Harbin, Chengdu, Tianjin, Shenyang, Fuzhou, etc. The Shanghai Municipal Telegraphic Bureau received their full aid and support to accomplish the preparation work together. A firm foundation of automatic receiving and transmission of telegrams has thus been established.

6168
CSO: 5500

SHANGHAI OPTICAL-FIBER COMMUNICATION SYSTEM SUCCESSFUL

Shanghai WEN HUI BAO in Chinese 20 Oct 79 p 1

[Text] News of victory from the city's Optical-Fiber Communication Society: The 120-line optical-fiber communication system of the Shanghai Municipal Telephonic Bureau between its Sichuan Road Branch and Haining Road Branch was connected to the city telephone network on 28 September for testing. This serves as a gift for the national holiday celebration.

Optical-fiber communication is a new technology beginning to be applied in the early 1970's. It has the advantages of an extensive range of application, large capacity, high interference resistance, convenient for keeping secrets, and achieving a saving of steel materials. The 120 lines of the optical-fiber system may be used to transmit ordinary telephone conversation, telegrams, written telephone, facsimiles, television programs, and computer data. After successful testing, this optical-fiber communication system will not only enlarge the local telephone capacity but also relay lines for long distance telephone to resolve the urgent need for communication and to shorten the distance between China's modernized communication technology and the international advanced level.

This battle for the city's optical-fiber communication began in May of last year. During the war, scientists, technicians, workers, and cadres coordinated closely with each other to develop the communist spirit of great cooperation and to break through difficult barriers. It took only about half a year, for the machinery, parts, optical cables, etc. of the entire lines of optical-fiber communication system to be made. Tests were carried out in offices of 1.18 km connections from late December of last year to early March of this year. Followed by continuous improvements, the equipment was installed and the 1.8 km of optical-fiber cable was buried in underground pipes in the later part of April. The test telephone conversation was a success on 28 April.

The 120-line optical fiber communication system was made entirely of China made components and materials. The system was tested by the eight-item standard of the Ministry of Posts and Telecommunications before it was experimentally connected to the city's telephone network to accumulate tens of thousands of pieces of data and to undergo continuous improvement and revision before the entire communication system was found to meet the various indices of the design requirements. The sound quality of the telephone transmission is good, and the characters of the written telephone and the images of the facsimiles are also very clear.

6168
CSO: 5500

BRIEFS

HIGH PRECISION COMPUTER-CALCULATOR--With the cooperation of the Shanghai Radio Instrument Plant, the Shanghai Observatory successfully made a computer-calculator with a timing precision of 1 millimicrosecond. It is a part of the terminal equipment of the laser artificial satellite telemetric system, to be used to measure the interval between laser emission pulse and the echo wave pulse reflected back from an artificial satellite so as to determine precisely the distance between the observing station and the artificial satellite. This instrument may be used as special equipment of laser telemetry and a precision instrument for measuring pulse intervals; therefore, it can be extensively applied in national defense, laser technology, nuclear physics, standard time measurement, and pulse measurement technologies. It may be used to determine directly the pulse delay time, the pulse cycle, the pulse width, the phase differential, and the ascending and descending times prior to and following solid circuit output. (By Li Zhenyu [2621 2182 1343]) [Text] [Shanghai WEN HUI BAO in Chinese 18 Oct 79 p 1] 6168

ANHUI RADIO, TV UNIVERSITY--The Anhui Provincial Conference on the work of Radio and TV University was held in Hefei, Anhui, 15-19 November, attended by the responsible persons of prefectural and municipal bureaus of education and broadcasting affairs and of the branch schools of the Provincial Radio and TV University. Hu Kaiming, member of the standing committee of the Provincial CCP Committee, vice chairman of the Provincial Revolutionary Committee and President of the Provincial Radio and TV University, addressed the conference. The Provincial Radio and TV University now has 17 branch schools in all prefectures and municipalities and teaching centers in 50 counties with an enrollment of more than 11,000. [Hefei Anhui Provincial Service in Mandarin 1100 GMT 28 Nov 79 OW]

XINJIANG TELECOMMUNICATIONS SERVICE--Urumqi, 30 Nov--To provide better service to passengers of all nationalities during the cold winter season, the Daximen telecommunications office in Urumqi Municipality of Xinjiang Uygur autonomous region has set up a "telecommunications service center" at Zhanzigou motor vehicle station, which is located quite far away from post and telecommunications offices. During the past month, this service counter connected 188 long distance calls, sent 684 cables, dispatched 842 letters and sold over 1,000 stamps to passengers of all nationalities. [Beijing XINHUA Domestic Service in Chinese 0113 GMT 30 Nov 79 OW]

CSO: 5500

SOUTH KOREA

BRIEFS

OPTICAL FIBER CABLE SYSTEM--Korea has made a gigantic step toward modernization of the national communications system by developing high-effect optical fiber communications, the Communications Ministry said yesterday. A 2.2-kilometer optical fiber cable, the first of its kinds made in the nation, has been installed on a trunk line between the Kwanghwamun and Chungang (central) Telephone Offices in downtown Seoul recently on a trial basis and formally put into operation yesterday, timed with the second anniversary of the foundation of the Korea Telecommunications Research Institute (KTRI). The optical fiber cables are being made in a joint operation between the KTRI, the Korea Institute of Science and Technology (KIST) and two domestic cable makers--the Gold Star Electric Co and Taihan Electric Wire Co. Dr Chong Man-yong, director of the KTRI, said that Korea had made "gigantic progress" toward the modernization of the communications industry by succeeding in developing the optical fiber communications system. Dr Chong revealed that the present cables made of copper would be gradually replaced by modernized optical fiber cables from next year. According to Dr Chong, the optical fiber cables, now widely used in advanced countries over the world, provide highly excellent effects in telecommunications compared with the current copper cables. [Text] [Seoul THE KOREA TIMES in English 11 Dec 79]

CSO: 5500

CSSR COMMUNICATIONS MINISTER COMMENTS ON NEW TRANSMITTERS

AU062102 Bratislava PRAVDA in Slovak 4 Dec 79 p 2 AU

[Report by Anna Zimaniova: "All-State Political-Economic Aktiv of Communications Workers: To Unite the Joint Efforts"]

[Excerpts] A 3-day all-state aktiv of communications workers opened in the capital of the Slovak Socialist Republic yesterday. In the presence of M. Zozulak, member of the CPSL Central Committee secretariat, V. Chalupa, CSSR minister of communications, and other guests, they will assess the fulfillment of this year's tasks and the preparation for insuring the fulfillment of the tasks of the last year of the Sixth Five-Year Plan.

In the main address Minister V. Chalupa assessed the fulfillment of this year's tasks. In the beginning he stated that despite the adjustments of the prices of communications services, which should have found an expression in the quality of services for the population, that goal has not been achieved yet. The communications workers have put a total of 95,000 telephone terminals into operation this year, thus fulfilling the annual plan 101.4 percent. Radio-communications workers continued to expand potential to receive the signal of the second television channel. The operation of the following transmitters has started in the course of the year: Modry Kamen, Nove Mesto nad Vahom and Freydek-Lysa Hora. The transmitters for the reception of the second television program Domazlice-Vrani Vrch and Trebic-Klucovska Hora have also been put into operation. Two more transmitter will be added during December. About 62 percent of the CSSR territory will thus be supplied with a good-quality second channel signal.

CSO: 5500

CZECHOSLOVAKIA

BRIEFS

NEW TELEVISION TRANSMITTERS--Another two transmitters for the second television channel--Ostrava-Hostalkovice and Jesenik-Praded--were put in operation in northern Moravia today. The ceremonious commissioning was attended by Vlastimil Chalupa, federal minister of communications. Both transmitters, each of 2-kilowatts output, were produced by the Tesla national enterprise, and meet the parameters for color transmission. The reconstruction of the Ostrava-Hostalkovice transmitter required an expenditure of KCS 83 million, and the new Jesenik-Praded transmitter was built at a cost of KCS106 million. [Text] [Bratislava Domestic Service in Slovak 2100 GMT 15 Dec 79 LD]

NEW TRANSMITTERS--A 3-day all-state aktiv of communications workers opened in the capital of the Slovak Socialist Republic yesterday. In the presence of M. Zozulak, member of the CPSL Central Committee secretariat, V. Chalupa, CSSR minister of communications, and other guests, they will assess the fulfillment of this year's tasks and the preparation for insuring the fulfillment of the tasks of the last year of the Sixth 5-Year Plan. In the main address Minister V. Chalupa assessed the fulfillment of this year's tasks. In the beginning he stated that despite the adjustments of the prices of communications services, which should have found an expression in the quality of services for the population, that goal has not been achieved yet. The communications workers have put a total of 95,000 telephone terminals into operation this year, thus fulfilling the annual plan 101.4 percent. Radio-communications workers continued to expand potential to receive the signal of the second television channel. The operation of the following transmitters has started in the course of the year: Modry Kamen, Nove Mesto Nad Vahom and Frydek-Lysa Hora. The transmitters for the reception of the second television program Domazlice-Vrani Vrch and Trebic-Klucovska Hora have also been put into operation. Two more transmitters will be added during December. About 62 percent of the CSSR territory will thus be supplied with a good-quality second channel signal. [Excerpts] [AU062102 Bratislava PRAVDA in Slovak 4 Dec 79 p 2 AU]

CSO: 5500

HAVANA'S INTELSAT SYSTEM FACILITIES BOLSTER INTERSPUTNIK

Havana BOHEMIA in Spanish 2 Nov 79 pp 66-67

[Passages enclosed in slantlines printed in boldface]

[Text] A new event took place in Cuban telecommunications recently: the installation of a medium-capacity earth station (called Standard B) for the INTELSAT [International Telecommunication Satellite] system. With the INTERSPUTNIK system, this considerably expands possibilities for telephone, telegraph, radiophoto and television exchange services with a large number of countries.

/What is the INTELSAT system?/ The INTELSAT system is an international telecommunications consortium that uses man-made satellites equipped with receiving and transmitting stations capable of world coverage. In other words, they permit the establishment of communications channels among all the countries of the world which have earth stations that meet the established technological specifications.

/Satellites over three oceans/ To provide world coverage, INTELSAT has satellites over three oceans--Atlantic, Indian and Pacific--which appear to be stationary. This apparent immobility is achieved to use satellites placed in geostationary orbits--that is, placed on the equator at a fixed distance from earth and rotating with it so that their time of orbit around our planet coincides with an average solar day.

To achieve the effect described above, the distance between the satellite and the surface of the earth is fixed at approximately 36,000 kilometers which permits it to cover the land surface at an angle of approximately 17 degrees. Since the satellite is equipped with antennas capable of providing that coverage, connections can be made among many very distant countries when these are in the same visual field of the satellite.

/Access for Cuba/ Cuba will have access to a satellite in the Atlantic region which permits direct connections with countries in America, Europe, Africa and the Middle East. If it wants to establish communications or broadcast a program to other areas--let us say, for example, the countries in the Indian Ocean area--it will have to enlist the aid of another country. This third country which will serve as intermediary must meet the following conditions: it must have a favorable geographic location which gives it access to the satellites in the Atlantic and Indian Ocean region and have the necessary installations. This is true of Algeria which was used to pass on television transmissions during the Sixth Summit Conference to those countries in the Indian Ocean area.

Now a series of IV-A satellites capable of retransmitting up to 6,000 telephone channels and two television programs with sound are being used. There is usually more than one satellite in each area in order to have larger capacity as well as planned emergency routes in case of service interruptions in one of them.

/Average life/ The average life of a satellite is 7 years but it is generally necessary to replace them with new models before that time due to the fact that the always growing demand for new circuits requires satellites with greater capacities. This is achieved by using replacements with the latest advances in current technology.

/Cuba has two systems/ Although the new earth station in the INTELSAT system is part of a medium-term plan, its installation was accelerated in order to be able to use its facilities during the recently concluded Sixth Summit Conference of Nonalined Countries. With this acquisition our country became one of the few that has access to the two satellite telecommunications systems. Algeria also has stations that work with both systems, having recently constructed its INTERSPUTNIK station. This was of great use to transmit our television programs on the conference through Algeria to those countries in the Indian Ocean area to which our country lacks direct access due to geographic location.

/Advantages/ Having earth stations in both systems has the following advantages for our country: direct access to a larger number of countries; alternate routes for telecommunications services; and the possibility of acting as intermediary between countries that use different systems (source of foreign currency). Even larger installations will be needed for intensive use.

/Technical equipment/ The new INTELSAT installation has a freestanding antenna 11 meters in diameter which is 6 meters away from the technical building. It has the necessary equipment for 24 telephone circuits now and, with a little additional investment, its capacity can increase to 60 circuits. The station can transmit and receive color or black-and-white television programs with sound, commentaries and an additional channel for technical coordination between television studios. It also has two service circuits to facilitate telephone and telegraph messages with other stations and with the system's operations center.

/Great effort/ In order for this new installation to be ready before the Sixth Summit Conference, the Ministry of Communications--organization in charge of this activity--through its Radiocommunications Office drew up a work schedule with very tight margins of time for each stage in the process, knowing the time available and starting from the time it was approved by the appropriate government levels. This began with signing the contract with the supplier and ended with putting the earth station into operation.

It should be pointed out that the term usually stipulated for this process is about 1 year. Nevertheless, this was reduced to only 3 months, basically because of the commitment contracted by the NEC [Nippon Electric Company Ltd.] to supply the equipment only 45 days after the contract was signed.

It was also due to the cooperation given by Aeroflot to transport the cargo to Havana, using an IL-76, the largest cargo jet in Soviet civil aviation which has the most modern loading and unloading systems.

There was also close and intensive cooperation from different state organizations that, in one way or another, helped complete the installation.

Finally the effort made by the Ministry of Construction to complete the construction in only 25 days, the Ministry of Foreign Trade to expedite the negotiations, the Ministry of Transportation to coordinate and contract the transportation and the different levels and enterprises of the Ministry of Communications must be mentioned.

PHOTO CAPTIONS

1. p 66. In front, the parabola of the INTELSAT system at the Caribbean Earth Station; behind, that of the INTERSPUTNIK system.

2. p 66. Telephone equipment with SCPC modulation (left) and HPA high-powered amplifier-transmitters (right).

3. p 67. Technical equipment for control and monitoring system.

4. p 67. Measurement of signal-to-noise ratio of telephone channel.

7717
CSO: 5500

COMMUNICATIONS GAINS UNDER CASTRO REPORTED TO CEMA

Havana GRANMA in Spanish 31 Oct 79 p 3

> [Text] Speech by Comrade Guillermo Garcia, member of the Political Bureau of the Cuban Communist Party Central Committee and vice president of the Councils of State and of Ministers, at the opening of the 17th meeting of the CEMA [Council for Mutual Economic Assistance] Permanent Commission for Posts and Telecommunications, in Havana, 29 October 1979 "Year 20 of the Victory."

Comrade Heads of Delegations of CEMA member countries,
Comrade Delegates,
Distinguished Representatives of the Diplomatic Corps,
Comrades:

I have the honor today, in behalf of the Cuban Communist Party and of our Government, to express to you our affectionate greetings and the most cordial of welcomes on the occasion of the holding in our country of the 17th meeting of the CEMA Permanent Commission for Posts and Telecommunications.

For those of us who are aware of the accomplishments of CEMA in this field, the holding of this event in Cuba, Latin America's first socialist country, represents, politically as well as economically, scientifically and technically, a great responsibility.

Since its creation in January 1949, CEMA has achieved notable successes. Cuba's entry into CEMA in July 1972 marked an important milestone in our country's economic relations.

This Commission began its work on 20 January 1972, and in November of that same year the Cuban Ministry of Communications's first delegation attended the Commissions 3rd meeting, to draw from it rich experience and to contribute its modest effort to the accomplishment of the Commission's objectives.

In every meeting held to date, decisive agreements have been reached in furtherance of the development of posts and telecommunications, a field of fundamental importance to the consolidation and growth of our national economies, to the linking together of all the peoples of the world, to the unveiling of our ideas and of socialism's creative accomplishments.

Our effort has been directed toward contributing to the improvement and expansion of coordination of posts and telecommunications development plans, toward broadening multilateral scientific and technical cooperation, toward improving the socialist international division of labor, toward the speeding up of technological progress, toward increasing the productivity of labor, toward cooperative production and toward productive specialization.

I am certain that the meeting we are inaugurating today will achieve new successes toward the furtherance and development of such promising objectives.

A heavy schedule of work awaits undertaking during the days you will be in our country. Among the items to be addressed I would like to cite a few that are of fundamental importance to the future development of communications in our respective countries.

Among other problems, the following can be enumerated:

1. The tasks to be addressed by the Commission deriving from the decision of the Council taken at its 33d meeting, and the decisions of the Executive Committee of the Council taken at its 91st and 92d meetings.

2. The agenda and date of the study to be undertaken by the Commission on the composition of the delegation from the Socialist Republic of Vietnam from the viewpoint of its participation in the CEMA Permanent Commission for Posts and Telecommunications from 1981 through 1985.

3. The draft agreement on specialization and cooperation in the production of equipment for the mechanization and automation of the production processes involved in postal communications and in the distribution of the press in the member countries of CEMA and in the Socialist Federal Republic of Yugoslavia.

Our country has a major interest in the objectives that can be achieved by this draft agreement through specialization and cooperation in production to the benefit of our national economies.

4. The results of the coordination with industry of the technical requirements for the next group of new equipment needed for the mechanization and automation of the production processes in postal communications enterprises and in the distribution of the press.

All of these problems have vital importance for our countries. Nevertheless, a realistic view of our needs and possibilities leads us to consider it of the essence to devote attention to a decisive aspect of the present state of the scientific and technical revolution: It has to do with the need for a significant speedup in technological development in the field of communications.

Technology, perhaps more than any other factor, offers us a potential for contributing to the socioeconomic development of our countries. However, our current structures and our resources have yielded less than their maximums toward the realization of that technological potential. We must exploit more effectively the possibilities of technological interchange among our countries for fostering and sustaining a technological leap forward in communications.

A more detailed study of the problem must produce appreciable increases in work productivity with consequent savings in the costs of social accomplishment.

Comrades:

To the Cuban Revolution, communications presented a patent drawback in relation to the pressing needs of our people.

The underdevelopment in this field was evident in the isolation of extensive zones in this country without communications facilities.

During the revolutionary period, the network of highways and roads that existed under capitalism has been tripled. The telegraph service has been modernized. Radio broadcasting covers almost our entire territory. Telephone communications have not only been extended to the rural areas but have also been modernized. Satellite communications have attained significant development.

A substantial investment plan continues today in this so highly important field for the socioeconomic development of our country.

The high degree of development achieved in our country in communications has been the fruit of efforts and sacrifices by our people in which the cooperation of the socialist camp has always played its part, without which we could not now be making available to our people this important service, even to the most remote localities on the island.

We have, moreover, a large number of technicians and specialists capable of responding to the demands of modern technology, able and ready to offer their services in other countries of the world, thus fulfilling one of our most sacred duties: our duty as internationalists.

These successes, together with those achieved by our other brother countries in the socialist camp, assure us of success in the future, and especially in this meeting.

Permit me to greet you in the name of our Cuban Communist Party and of our Government.

I wish you a very pleasant stay in our capital and all kinds of successes in the highly important work you will be undertaking in this meeting.

Many thanks.

9399

CSO: 5500

IRAQ

BRIEFS

NEW TV STATION--Iraqi Revolution Command Council member and Deputy Prime minister Tario 'Aziz yesterday opened a television station in Wasit. The station incorporates transmitters, a reserve electricity generating station and UHF equipment. [LD101117 Baghdad AL-JUMHURIYAH in Arabic 6 Dec 79 p 4 LD]

CSO: 5500

POSSIBILITY OF SATELLITE TV RECEPTION SEEN UNLIKELY

Salisbury THE HERALD in English 14 Dec 79 p 3

[Text] **ALTHOUGH television viewers in Britain expect to receive programmes beamed by satellite from Europe by the middle of the next decade, it will take a while longer for satellite television to reach Rhodesia, a Bulawayo spokesman for the Zimbabwe Rhodesian Broadcasting Corporation said.**

He was commenting on a prediction by the former British Prime Minister, Sir Harold Wilson, that homes in Britain might soon be receiving television programmes beamed from the Continent by satellite.

The programmes, which would cover the whole of Britain, could be picked up with the use of a "dish" aerial which viewers could instal in the loft. France and Luxembourg had said that three satellites would be in orbit by the early 1980s, broadcasting in three languages, including English.

The ZRBC spokesman said it would be possible to have satellite television in this country, but, because of the money and equipment involved, it was unlikely to come soon.

"The satellite would have to be about 200 km up in the sky and we haven't the means to put it there. You would need a rocket to do it. It would cost millions to get it up, and I can't see it happening for many years," he said.

If any African country were to put up a satellite transmitter, South Africa would probably be the first, as they had the largest organisation to handle such a venture.

A Bulawayo tele-communications technician said Rhodesia would not be able to pick up programmes from the European satellite. The satellite's beam was limited to an area of a few hundred kilometres and to transmit to a wider area, more power would be needed.

CSO: 5500

BRIEFS

DIRECT DIALING FOR UMVUKWES--The conversion of the Umvukwes telephone exchange from manual to automatic begins tomorrow. The PTC announced yesterday that the changeover of direct exchange line subscribers will be carried out between 9 a.m. and noon tomorrow. "During this period subscribers are requested to avoid making calls to and from Umvukwes unless absolutely essential," a spokesman for the corporation said. "From 9 a.m. onwards on Saturday the new numbers for the direct exchange lines, shown in brackets in volume two of the 1979 telephone directory, must be used. The STD code will be 169. "The changeover of partyline subscribers will be carried out progressively from Monday onwards and the new numbers for partyline subscribers shown in brackets in volume two of the 1979 directory must be used. It will take some time to convert all the partylines to automatic working and, until completed, a call made to a party line will be intercepted and the caller advised to book the call through the local exchange operator. "Once connected to the automatic exchange, Umvukwes subscribers should follow the instructions in the directory for making trunk calls." [Text] [Salisbury THE HERALD in English 14 Dec 79 p 9]

CSO: 5500

RWANDA

BRIEFS

JAPANESE BUILD GROUND STATION--Beginning in 1982, the "country of 1,000 hills" will be linked to the international automatic telecommunications network. The Japan International Cooperation Agency will, in the form of a gift, finance the construction of a satellite telecommunications ground station in Rwanda as well as the installation of automatic electronic switching for the telephone and the telex. The Japanese agency will also take charge of the improvement and development of the main connections of the interior network. The cost of the entire project is estimated at 675 million Rwandan francs (1,687.5 million CFA francs). [Text] [Paris DEMAIN L'AFRIQUE in French 3 Dec 79 p 55]

CSO: 5500

BRIEFS

TELECOMMUNICATIONS LICENCES RENEWAL--Will any person who operates a radio receiver/transmitter in any place in Seychelles or on any ship registered in Seychelles and who has failed to apply for or renew his telecommunication licence please do so as soon as possible. Application forms are available from the office of the Under Secretary, Information, at Radio Seychelles. [Text] [Victoria NATION in English 23 Nov 79 p 2]

CSO: 5500

BRIEFS

SATELLITE STATION--The new satellite earth station that receives and transmits international telephone, telegraph, telex and other communications messages throughout the day was yesterday commissioned by the acting first vice president, Mr A. B. Kamara. Situated at Wilberforce, the station is designed to meet the international telecommunications satellite organisation (INTELSAT) standard specification. [Excerpt] [AB172040 Freetown DAILY MAIL in English 7 Dec 79 p 1 AB]

CSO: 5500

TELECOMMUNICATIONS EQUIPMENT AGREEMENT CONCLUDED

Johannesburg THE STAR in English 22 Nov 79 p 33

[Text] The 15-year telecommunications equipment supply agreement recently concluded between the South African Post Office and four electronics companies is estimated to be worth R4 000m to R5 000m and could exceed this figure depending on inflation, a senior post office spokesman said.

He said the agreement covers the supply of equipment for the fully electronic digital telephone system currently being introduced by the post office, as well as extensions to the existing electro-magnetic system, and other communications systems.

The spokesman said that with steadily increasing demand for telephones, especially from prospective black subscribers, the projected electronic system, aimed ultimately at the complete local manufacture of the German-designed EWSD system, and the French-designed E-10 system, would not be completed before the end of the century.

However, it is expected some electronic switching will be introduced in the Johannesburg and Pretoria areas in 1980, he added.

The spokesman said the supply agreement had been concluded with the 52 percent German-owned Siemens, AG, the UK-controlled Plessey (SA), Telephone Manufacturers of South Africa (Pty) Ltd (Temca), which is jointly owned by Plessey (UK) and GEC (UK), and Standard Telephones and Cables (SA) which is linked with Allied Technologies (Altech). — Reuter.

CSO: 5500

LICENSING CHANGE SHOULD STIMULATE TV MARKET

Johannesburg THE CITIZEN in English 4 Dec 79 p 8

[Article by Lynn Carlisle]

[Text] The latest SABC-TV licencing and programme benefits should "turn on" viewers and boost sales of sets in a somewhat "saturated" market, TV manufacturers said yesterday.

Only one television licence will be needed in each household from October next year--regardless of the number of sets.

And viewing time will be extended by six hours a week as from April, SABC's Dr P J Meyer said last week.

Manufacturers have been "switched on" by the decisions, which they say are practical and sensible solutions liable to stimulate sales.

Their main ray of light in this regard would have been the introduction of a Black television service in January 1982.

"I see benefits for all. For those wanting portable sets as well as bigger sets, which will get more usage. Administrative costs will also be cut," said Mr John Turner, general manager of Barlows Appliance and Television Co.

Mr Mike Bosworth, managing director of SA Television Manufacturers, said many people in a somewhat saturated "White" market favoured a second set--especially a portable one.

"I see this as a positive response making television as a whole a more attractive proposition," he said.

Tedelex joint managing director, Mr Jack Cohen, said the industry had been put off by the extra licence fee (R35 a set) in relation to the value of cheap portable sets.

"Viewers will be switched on, particularly with extra viewing hours at weekends, which will help," he said.

Some manufacturers said sales for 1979 were lower than last year's but "better than expected" at the beginning of the year.

CSO: 5500

THIRD COMMUNICATION SATELLITE STATION GOES INTO OPERATION

Johannesburg THE CITIZEN in English 18 Dec 79 p 8

[Article by Johan Kloppers]

[Text]

SOUTH AFRICA's third earth satellite station "Pretoria No 3" became operational at Hartbeesthoek about 60 km west of Pretoria on Friday.

The Post Office said in a statement: "This will provide South Africa with the capacity to expand its already comprehensive telecommunications services through satellite links to other countries even further."

"Hartbeesthoek is part of an international programme to which South Africa contributes as a member country of the International Telecommunications Satellite Organisation — Intelsat — which aims to provide telecommunication services of high quality at international level.

"The three earth stations at Hartbeesthoek are maintained by the Department of Posts and Telecommunications in accordance with an international agreement."

The department was also responsible for the building programme of the stations at a total cost of R14-m — the construction costs of Pretoria 3 amounting to R4,8-million.

"With regard to the extent of its telecommunication services, South Africa is at present placed 24th on the list of countries that use Intelsat's worldwide telecommunications service.

"The satellite communication system does not replace the undersea cable, which became operational in 1968, but provides an additional service.

"South Africans are at present using about 20-million minutes in communication time a year through Hartbeesthoek and the undersea cable to the outside world.

"This includes voice, image and other signals. Local telephone subscribers can now dial direct to subscribers in 40 other countries.

"The earth satellite station is not only able to provide more extensive services than the cable alone, but is also a much more economical proposition.

"The estimated cost of a new undersea cable would be in the region of R100-m.

"The installation of a second undersea cable may, however, be justified for reasons unrelated to cost," the statement said.

"Hartbeesthoek also provides South Africa with its first international television link. Since 1975 colour transmissions can be received from and beamed to other countries."

CSO: [illegible]

BLACK TV CHANNEL PLANS REVIEWED

Johannesburg THE STAR in English 12 Dec 79 p 3

[Article by Ian Gray]

[Text] SABC's second channel, TV2, will create at least 1 000 jobs for blacks — including more than 100 posts for producers.

"And," said Director-General Mr Jan Swanepoel, "the service will be run by blacks as soon as possible."

Initially, all the organisers — heads of departments — will be white, but this will change by the end of next year.

Mr Swanepoel said he was confident the new channel will open as planned in January 1981 with 27 hours of programmes a week. Advertisers have been allocated 8 percent of transmission time, compared to 5,75 percent on the present service.

TV2 is expected to run at a loss of R19-million a year for five years. The Government has given a grant of R35-million spread over five years, but the balance will be borne by the corporation.

A total of R23-million will be spent on getting the service off the ground next year, most of which will go towards the fitting out of the old Broadcast House in Commissioner Street.

Expenditure will include the acquisition of eight new outside broadcasting units, and areas such as Durban and Port Elizabeth will eventually have their own units.

Mr Swanepoel said that during next year the SABC will train 108 producers, 20 assistant producers, 103 production assistants, 10 editors, 28 cameramen and their back-up sound and lighting crews.

He pointed out that SABC this year once again narrowed the gap between black and white salaries. Black staff received increases of up to 20 percent, and now earn up to R14 000 a year, excluding freelance income.

The SABC is now looking for trained black technicians for radio and television.

"Our problem is that there are so few trained African, Indian and coloured technicians, and we are not in a position to train them ourselves," said Mr Swanepoel.

CSO: [illegible]00

BRIEFS

THIRD SATELLITE STATION--South Africa's third satellite tracking station has become operational. Named Pretoria-III and situated at Hartesbeesthoek, it was built at a cost of almost 5 million rand and will enable South Africa to expand its telecommunications links with other countries considerably. Hartebeesthoek forms part of an international program in which South Africa is involved and its three satellite stations have been built by the post office at a cost of about 14 million rand. [Text] [LD160752 Johannesburg Domestic Service in English 0600 GMT 15 Dec 79 LD/CA]

CSO: 5500

RURAL TELEVISION, RADIO RECEPTION PROBLEMS DISCUSSED

Lusaka TIMES OF ZAMBIA in English 5 Dec 79 p 1

[Excerpt]

MINISTER of State for Information and Broadcasting **Dr Mainga Bull**, said yesterday it was unrealistic to establish television services in all rural towns while radio reception continued to be shoddy.

Dr Bull said in Parliament that the policy of the ministry would be to improve radio reception first, and the question of providing a country-wide television network would rise later.

Parliament resumed business yesterday after a recess of almost three months.

Dr Bull said this in reply to a question from Mpulungu MP, **Mr Windi Mastruka**, who wanted to know when television services would be extended to Mbala.

She said television would require heavy investment in manpower and technical infrastructure to Mbala and other remote parts.

She said because of the country's economic problems, the ministry would not undertake such costly ventures, but would give priority to improvement of radio reception.

Moreover, Dr Bull said, radio facilities could be afforded by a large section of the population while television sets were enjoyed only by an elite segment.

She denied that the neglect of the television facilities to the rural areas would be a departure from the Party's policies to spread entertainment and recreation to all parts of the country.

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BRIEFS

IRKUTSKAYA OBLAST RETRANSMITTER--Irkutskaya Oblast--Television screens have lit up in the homes of reindeer breeders in the settlement of Alygdener, situated in the mountainous region of Tofalariya. A television retransmitter has been commissioned here. [Text] [LD061611 Moscow SOVETSKAYA KULTURA in Russian 20 Nov 79 p 3 LD]

STAVROPOLSKIY KRAY TV--Cherkessk (Stavropolskiy Kray), 25 Nov--Television screens have lit up in the homes of residents of the village of Khabez, which is a rayon center, and the population centers surrounding it. Construction of a retransmitter has been completed here on one of the highest peaks in this zone. There are now seven television towers in Karachayevo-Cherkesiya, but there will soon be more. A radio relay line is being laid down in the Cherkessk-Dombay direction. It is planned to station a further seven retransmitters on it. [Text] [LD061613 Moscow PRAVDA in Russian 26 Nov 79 p 6 LD]

IRKUTSKAYA OBLAST TV--Blue screens now light up every evening in the distant taiga settlement of Vitimskiy in Irkutskaya Oblast: television has come to the working people's homes. [Excerpt] [LD061615 Moscow PRAVDA in Russian 28 Nov 79 p 6 LD]

CSO: 5500

CORRESPONDENT VIEWS WARC-79 CONFERENCE

DW101232 Munich SUDDEUTSCHE ZEITUNG in German 10 Dec 79 p 4 DW

[Article by Karl-Otto Saur: "There Is Not Much Room in the Ether"]

[Text] Twenty years ago everything was much simpler and clearer. When the last great frequency conference took place in Geneva in 1959, laying down the so-called "radio regulations," that is a system of radio broadcasts on all frequencies, not more than 60 states participated. In 1979, however, 144 countries put in their requests during the negotiations, which lasted for 10 weeks, with regard to using their technical potential in various radio services to each state's own advantage.

It was almost natural that a north-south confrontation broke out here also. The countries of the Third World viewed most skeptically every suggestion by the industrial states, particularly when it came from the United States. The interests of the countries were most different. It was demonstrated technically by such a simple example as CB radio, that is a hobby radio with stationary or mobile stations that has rapidly developed in industrial states in past years. Only 12 channels are available in the Federal Republic for CB radio. Due to the improvement of radio sets with a range of up to 20 kilometers these channels are so crammed now that an increase in the number of channels would be urgently necessary. It has been suggested in Geneva that more frequencies be made available worldwide for CB radio. It would have had the additional advantage that all sets in the whole world could be used for that purpose. The countries of the Third World, however, could not follow that suggestion because they failed to see the necessity of private radio operation with a range of 20 kilometers since their official radio stations sometimes do not even have that range.

So the interest of developing countries was very much aimed at the frequencies that were available for radio and television services. Due to their majority they could implement decisions that were not always approved, particularly by post and radio communication authorities of the United States and Europe, because these authorities are responsible for a great number of radio communications outside the sphere of radio and television that require great efforts due to the worldwide shortage of frequencies.

At the end of the conference there was a situation in which the postal administrations were less satisfied than the radio authorities who are profiting, also in industrial countries, from the wishes of developing countries.

The best example in this connection is the worldwide expansion of the FM frequency network by 65 percent. The frequencies from 85.5 to 100 megahertz will be extended to 108 megahertz in two phases up to 1995. There are transition regulations permitting the broadcasting of radio programs on these frequencies at an earlier time. That would mean in practice that the Federal Republic in the qualitatively good FM frequency field could broadcast in one region an average of five programs instead of three. That will certainly touch off new discussions on the admission of other programs than those of public radio networks. The plans of the Bavarian network to start a fourth radio program next fall must be viewed against that background.

The European countries together with the Soviet Union had to accept considerable disadvantages in the shortwave field. These frequencies particularly are considered by the Third World as most important for the development of their local radio stations. In the present new distribution such great foreign stations as Voice of America, BBC or Deutsche Welle as well as Soviet shortwave transmitters had to accept considerable curtailments.

The industrial countries also did not prevail with regard to their request to obtain a frequency for a radio satellite of their own. That radio satellite in the sphere of 1 gigahertz was supposed to permit broadcasting for great areas which would have permitted in contrast to the planned television satellite in the sphere of 12.5 gigahertz mobile reception without a parabolic antenna. Plans for satellite television that were worked out in a 1977 preparatory Geneva conference have been confirmed. The equatorial countries claimed up until the end of the conference a "leasing fee" for the satellite at an altitude of 36,000 kilometers over the equator in outer space, but the other countries refused. Some plans pertaining to the reception of satellite programs beyond border lines will turn out to be more complicated in the reality of the eighties than one has thought so far.

Because of the shortage of frequencies, the 12.5 gigahertz satellite frequency was permitted to be used for earth purposes such as directional beams of the Bundespost, for example. The prerequisite for using these frequencies is merely the necessity not to interfere in the reception of satellite programs by the broadcasting country. Reception of Radio Luxembourg programs in the Federal Republic, however, could collide with our own radio services here. At any rate the expectations of some advocates of private radio and television programs based on the extension of frequencies were not fulfilled. On the contrary; Geneva demonstrated that there is not much room in the ether.

CSO: 5500

KIEV MILITARY RADAR TRANSMITTER INTERFERING WITH SHORT-WAVE COMMUNICATIONS

Oslo AFTENPOSTEN in Norwegian 4 Dec 79 p 52

[Text] "All of Europe is greatly troubled by interferences from the military above-the-horizon radar installation at Kiev. What we fear most is that they will get more of such installations. For the time being, there are no indications that something like that is in progress, but, on the other hand, it is quite obvious that the Russians will not cover their borders with just this sender," Gunnar Borvik, manager of Rogaland Radio, told AFTENPOSTEN.

Gunnar Borvik does not want to comment on the fact that the Ministry of Foreign Affairs asked the Norwegian delegation to the frequency conference in Geneva not to include the problems caused by the Kiev transmitter in the agenda of the conference. "Even if I consider the WARC conference to be the right forum in which to take up such matters--seeing that it was attended by delegates from all the countries which are members of the International Telecommunication Union--there may be certain aspects of this question the scope of which is more easily seen by the Ministry of Foreign Affairs," he said.

"The Kiev transmitter has now been interfering with short-wave communications in large parts of the world for more than 3 years. Much has been done, both nationally and internationally, to make the Russians stop this practice. What more can be done, or have they given up finding a solution?"

"We can only hope and believe that constant repetition of the complaints will gradually have the desired effect. The complaints, of course, have had some effect. The transmitter is no longer as frequently on the air, and the band width has been reduced. But it is still a daily nuisance."

Gunnar Borvik says that he now hopes that the Telecommunications Department and the Ministry of Foreign Affairs will sit down to discuss the problems caused by the Kiev transmitter if they disagree on the strategy. "It pays Norway best to be united in its position on this matter externally," he said.

"Has Rogaland Radio been bothered by the American above-the-horizon radar?"

"So far, we have heard it once or twice. But it is based on an entirely different technology than the Russian transmitter and takes up such a narrow band width that it does not cause more interference than an ordinary telephony station. The Russians, on the other hand, sweep an entire band, and, compared with the American station, the Kiev transmitter takes up a frequency spectrum which is as wide as a decent freeway," Borvik says.

"Will you be able to handle the Christmas traffic, despite the Kiev transmitter?"

"We hope so, even if interferences with communications are a greater disadvantage where the traffic is heavy. It is especially to transmissions directed towards the Persian Gulf and the Indian Ocean that the Kiev transmitter creates the biggest problems."

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SPAIN

BRIEFS

NATIONAL RADIO NEWCASTS--As of tomorrow, the radio stations of Radio Cadena Espanola [REM-CAR] in Vallodolio, Leon, Navarra, Burgos and Albacete will broadcast live the news bulletins and newsreels of Radio Nacional de Espana [RNE]. This step, which will considerably extend the coverage of our station, RNE, has been taken within the framework of cooperation in which as state networks RNE and REM-CAR (coordinate) their activities.[Text] [LD101058 Madrid Domestic Service in Spanish 0800 GMT 9 Dec 79 LD]

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